STIC

Scientific & Technical Information Center

Search Report
EIC 2800

STIC Database Tracking Number: 2[illegible]

To: KIET NGUYEN	From: DIANE JACKSON
Location: JEF-4D49	Location: EIC2800
Art Unit: 2881	JEF-4B68 / JEF-4B68
Friday, August 10, 2007	Phone: (571)272-3260
Case Serial Number: 09836743	diane.jackson@uspto.gov

Search Notes

Attached are litigation search results in Lexis Nexis, and CourtLink and Questel-Orbit.

No Litigation was found for Serial Number 09/836743 .

If you have any questions, please feel free to contact me.

Thanks,

Diane

sira
Search and Information Resources Administration

LexisNexis CourtLink

Welcome Diane Jackson!

Patent Search 6020592 8/10/2007

No cases found.

Return to Search

(Charges for search still apply)

Source: **Combined Source Set 10** - **Utility, Design and Plant Patents**
Terms: **patno=6020592** (Edit Search | Suggest Terms for My Search)

128370 (09) 6020592 February 1, 2000

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

6020592

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Order Patent File History / Wrapper from REEDFAX®
Link to Claims Section

February 1, 2000

Dose monitor for plasma doping system

REISSUE: April 17, 2001 - Reissue Application filed Ex. Gp.: 2878; Re. S.N. 09/836,743 (O.G. June 19, 2001)

INVENTOR: Liebert, Reuel B. - Peabody, Massachusetts, United States (US); Pedersen, Bjorn O. - Chelmsford, Massachusetts, United States (US); Goeckner, Matthew - Palo Alto, California, United States (US)

APPL-NO: 128370 (09)

FILED-DATE: August 3, 1998

GRANTED-DATE: February 1, 2000

ASSIGNEE-PRE-ISSUE: August 3, 1998 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., VARIAN ASSOCIATES, INC. LEGAL DEPARTMENT M/S E-339 3100 HANSEN WAYPALO ALTO, CALIFORNIA, 94304, Reel and Frame Number: 009368/0590
May 10, 1999 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., VARIAN SEMICONDUCTOR EQUIPMENT ASSOCIATES, INC. 35 DORY ROADGLOUCESTER, MASSACHUSETTS, 01930, Reel and Frame Number: 010023/0940

ASSIGNEE-AT-ISSUE: Varian Semiconductor Equipment Associates, Inc., Gloucester, Massachusetts, United States (US), United States company or corporation (02)

LEGAL-REP: Wolf, Greenfield & Sacks, P.C.

PUB-TYPE: February 1, 2000 - Utility Patent having no previously published pre-grant publication (A)

PUB-COUNTRY: United States (US)

US-MAIN-CL: 250#492.21

CL: 250

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Search > Patent Search > Searching

Patent Search 6300643 8/10/2007

No cases found.

Return to Search

(Charges for search still apply)

Source: **Combined Source Set 10** - **Utility, Design and Plant Patents**
Terms: **patno=6300643** (Edit Search | Suggest Terms for My Search)

455550 (09) 6300643 October 9, 2001

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

6300643

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Link to Claims Section

October 9, 2001

Dose monitor for plasma doping system

INVENTOR: Fang, Ziwei - Sunnyvale, California, United States (US); Goeckner, Matthew - Plano, Texas, United States (US)

CERT-CORRECTION: April 29, 2003 - a Certificate of Correction was issued for this patent (O.G. May 20, 2003)

APPL-NO: 455550 (09)

FILED-DATE: December 6, 1999

GRANTED-DATE: October 9, 2001

ASSIGNEE-PRE-ISSUE: February 28, 2000 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., VARIAN SEMICONDUCTOR EQUIPMENT ASSOCIATES, INC. 35 DORY ROADGLOUCESTER, MASSACHUSETTS, 01930, Reel and Frame Number: 010583/0565

ASSIGNEE-AT-ISSUE: Varian Semiconductor Equipment Associates, Inc., Gloucester, Massachusetts, United States (US), United States company or corporation (02)

LEGAL-REP: Wolf, Greenfield & Sacks, P.C.

PUB-TYPE: October 9, 2001 - Utility Patent having no previously published pre-grant publication (B1)

PUB-COUNTRY: United States (US)

REL-DATA:
Continuation-in-part of Ser. No. 09/128370, August 3, 1998, GRANTED PATENT 6020592, Utility Patent having no previously published pre-grant publication (A)

US-MAIN-CL: 250#492.21

US-ADDL-CL: 250#397

Patent Search 6528805 8/10/2007

No cases found.

Return to Search

(Charges for search still apply)

916998 (09) 6528805 March 4, 2003

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

6528805

March 4, 2003

Dose monitor for plasma doping system

INVENTOR: Fang, Ziwei - Sunnyvale, California, United States (US); Goeckner, Matthew - Plano, Texas, United States (US)

APPL-NO: 916998 (09)

FILED-DATE: July 27, 2001

GRANTED-DATE: March 4, 2003

ASSIGNEE-AT-ISSUE: Varian Semiconductor Equipment Associates, Inc., Gloucester, Massachusetts, United States (US), United States company or corporation (02)

PUB-TYPE: March 4, 2003 - Utility Patent having a previously published pre-grant publication (B2)

PUB-COUNTRY: United States (US)

REL-DATA:
Division of Ser. No. 09/455550, December 6, 1999, GRANTED PATENT 6300643, Utility Patent having no previously published pre-grant publication (A)
, which is a Continuation-in-part of Ser. No. 09/128370, August 3, 1998, GRANTED PATENT 6020592, Utility Patent having no previously published pre-grant publication (A)
Prior Publication 20010042827, November 22, 2001, PENDING

US-MAIN-CL: 250#492.21

US-ADDL-CL: 250#397

CL: 250

SEARCH-FLD: 250#492.1, 250#397, 324#71.3, 324#72

IPC-MAIN-CL: [7] H01J 037#244

Query/Command : prt ful legalall max

1 / 6 FAMPAT - ©QUESTEL-ORBIT - image

FAN - 20042792667016

PN - WO200141183 A1 20010607 [WO200141183]
STG: Publ. Of int. Appl. With int. Search rep
AP : 2000WO-US32576 20001129
TW483021 B 20020411 [TW-483021]
STG: Patent
AP : 2000TW-0125958 20001206
WO200141183 A8 20020523 [WO200141183]
STG: Modified first page
WO200141183 A9 20020620 [WO200141183]
STG: Complete corrected document
EP1236221 A1 20020904 [EP1236221]
STG: Public. Of applic. With search report
AP : 2000EP-0982300 20001129
JP2003515945-T 20030507 [JP2003515945]
STG: Unexam. Pat. Appl. On foreign appl.
AP : 2001JP-0542358 20001129

TI - DOSE MONITOR FOR PLASMA DOPING SYSTEM

PA - VARIAN SEMICONDUCTOR EQUIPMENT

PA0 - Varian Semiconductor Equipment Associates Inc.; 35 Dory Road; Gloucester, MA 01930 (US)

IN - FANG ZIWEI; GOECKNER MATTHEW

PR - 1999US-0455550 19991206; 2000WO-US32576 20001129

IC - C23C-014/48
H01J-037/244
H01J-037/32
H01L-021/265

ICAA - H01J-037/32 [2006-01 A - I R M EP]

ICCA - H01J-037/32 [2006 C - I R M EP]

EC - H01J-037/32D1C1
H01J-037/32J

DS - (EP1236221)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR
AL LT LV MK RO SI

DS - (WO200141183)
IL JP KR European Patent (AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR)

CT - (EP1236221)
Revealed during examination
US4751393(A); US5814823(A)
See also references of WO 0141183A1

CT - (WO200141183)
Cited in the search report
US5103161(A)(Cat. X);EP860854(A1)(Cat. Y);US5583427(A)(Cat. Y);WO0008670(A2)

(Cat. A,P,D);EP532283(A1)(Cat. A)
See also references of EP 1236221A1

AB - (WO200141183)
Plasma doping apparatus includes a plasma doping chamber, a platen mounted in the plasma doping chamber for supporting a workpiece such as a semiconductor wafer, a source of ionizable gas coupled to the chamber, an anode spaced from the platen and a pulse source for applying voltage pulses between the platen and the anode. The voltage pulses produce a plasma having a plasma sheath in the vicinity of the workpiece. The voltage pulses accelerate positive ions across the plasma sheath toward the platen for implantation into the workpiece. The plasma doping apparatus includes at least one Faraday cup positioned adjacent to the platen for collecting a sample of the positive ions accelerated across the plasma sheath. The sample is representative of the dose of positive ions implanted into the workpiece.+DBPH+ The Faraday cup may include a multi-aperture cover for reducing the risk of discharge within the interior chamber of the Faraday cup. The Faraday cup may be configured to produce a lateral electric field within the interior chamber for suppressing escape of electrons, thereby improving measurement accuracy.

OBJ - (WO200141183)
This application is a continuation-in-part of pending application Serial No. 09/128,370
This invention relates to plasma doping systems used for ion implantation of workpieces and, more particularly, to methods and apparatus for measuring the ion dose
According a first aspect of the invention, plasma doping apparatus is provided.

ADB - (WO200141183)
Accordingly, there is a need for improved methods and apparatus for measuring ion dose implanted into a workpiece in plasma doping systems.
The annular Faraday cup 80 has the advantage that localized variations in ion current are averaged around the periphery of wafer 20.
The effective range for using the Faraday cup as a dose monitor is therefore limited due to this discharge problem.
This eliminates the discharge problem within the Faraday cup and extends the operational range of the Faraday cup to higher pressures and lower voltages.
This effect, known as the space charge effect, must be taken into consideration when the ion density is above 108 ions per cubic centimeter.

ICLM - (WO200141183)
19. Plasma doping apparatus comprising:
a plasma doping chamber;
a platen mounted in said plasma doping chamber for supporting a workpiece, said platen and the workpiece constituting a cathode;
a source of ionizable gas coupled to said chamber, said ionizable gas containing a desired dopant for implantation into the workpiece;
an anode spaced from said platen;
a pulse source for applying voltage pulses between said platen and said anode for producing a plasma having a plasma sheath in the vicinity of said workpiece, said plasma containing positive ions of said ionizable gas, said voltage pulses accelerating positive ions across the plasma sheath toward said platen for implantation into the workpiece;
and
a Faraday cup positioned adjacent to said platen for collecting a sample of said positive ions accelerated across said plasma sheath, said sample being representative of the number of positive ions implanted into the workpiece, said Faraday cup including means for producing within an interior chamber of said Faraday cup an electric field lateral to the direction of ions entering said Faraday cup.

24. A Faraday cup for sensing an ion beam, comprising:
a sidewall and a bottom wall defining an interior chamber, said interior chamber having an opening; and
a cover disposed over said opening, said cover having a plurality of apertures for allowing ions to enter the interior chamber.
31. A Faraday cup for sensing an ion beam, comprising:
a sidewall and a bottom wall defining an interior chamber, said interior chamber having an opening; and
means for producing within the interior chamber of said Faraday cup an electric field lateral to the direction of ions entering said Faraday cup.

UP - 2003-23

1/3 LGST - ©EPO

PN - TW483021 B 20020411 [TW-483021]

AP - TW89125958 20001206 [2000TW-0125958]

ACT - 20020821 TW/GD4A-A [+]
ISSUE OF PATENT CERTIFICATE FOR GRANTED INVENTION PATENT
ISSUE OF PATENT CERTIFICATE FOR GRANTED INVENTION PATENT

20040511 TW/MM4A-A [-]
ANNULMENT OR LAPSE OF PATENT DUE TO NON-PAYMENT OF FEES
ANNULMENT OR LAPSE OF PATENT DUE TO NON-PAYMENT OF FEES

UP - 2004-31

2/3 LGST - ©EPO

PN - WO200141183 A1 20010607 [WO200141183]
WO200141183 A8 20020523 [WO200141183]
WO200141183 A9 20020620 [WO200141183]

AP - WOUS0032576 20001129 [2000WO-US32576]

ACT - 20010607 WO/AK [+]
DESIGNATED STATES
IL JP KR

20010607 WO/AL [+]
DESIGNATED COUNTRIES FOR REGIONAL PATENTS
AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

20010801 WO/121
EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION

20011018 WO/DFPE
REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE

20020523 WO/CFP
CORRECTED VERSION OF A PAMPHLET FRONT PAGE

20020523 WO/AK [+]
DESIGNATED STATES
CN IL JP KR

20020523 WO/AL [+]
DESIGNATED COUNTRIES FOR REGIONAL PATENTS
AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

20020531 WO/ENP
ENTRY INTO THE NATIONAL PHASE IN:
JP 2001 542358A [2001JP-0542358]

20020605 WO/WWE [+]
WIPO INFORMATION: ENTRY INTO NATIONAL PHASE
< 1020027007166 >

20020620 WO/AK [+]
DESIGNATED STATES
CN IL JP KR

20020620 WO/AL [+]
DESIGNATED COUNTRIES FOR REGIONAL PATENTS
AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

20020620 WO/COP
CORRECTED VERSION OF PAMPHLET
PAGES 1/8-8/8, DRAWINGS, REPLACED BY NEW PAGES 1/8-8/8; DUE TO LATE TRANSMITTAL BY THE RECEIVING OFFICE

20020713 WO/WWP [+]
WIPO INORMATION: PUBLISHED IN NATIONAL OFFICE
< 1020027007166 >

UP - 2006-42

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3 / 3 LGST - ©EPO

PN - EP1236221 A1 20020904 [EP1236221]

AP - EP00982300 20001129 [2000EP-0982300]

ACT - 20020904 EP/AX-A [+]
EXTENSION OF THE EUROPEAN PATENT TO
ERSTRECKUNG DES EUROPAEISCHEN PATENTS AUF
AL;LT;LV;MK;RO;SI

20020904 EP/AK-A [+]
DESIGNATED CONTRACTING STATES:
BENANNTE VERTRAGSSTAATEN
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

20020904 EP/17P-A [+]

REQUEST FOR EXAMINATION FILED
PRUEFUNGSANTRAG GESTELLT
EFFECTIVE DATE: 20020524

20021030 EP/RIN1-A
INVENTOR (CORRECTION)
ERFINDER (KORR.)
FANG, ZIWEI

20021030 EP/RIN1-A
INVENTOR (CORRECTION)
ERFINDER (KORR.)
GOECKNER, MATTHEW

20040526 EP/RBV-A [+]
DESIGNATED CONTRACTING STATES (CORRECTION):
BENANNTE VERTRAGSSTAATEN (KORR.)
DE FR GB IT

20040908 EP/17Q-A [+]
FIRST EXAMINATION REPORT
ERSTER PRUEFUNGSBESCHEID
EFFECTIVE DATE: 20040723

20070103 EP/17Q-A [+]
FIRST EXAMINATION REPORT
ERSTER PRUEFUNGSBESCHEID
EFFECTIVE DATE: 20040723

UP - 2007-01

Search statement 2

Back

Extended Family Search Results

US6020592/PN Results : 12

PATENT FAMILY

#	Patent No.	Kind	Date	Applic.No.	Date
1)	EP1103063	A2	20010530	1999EP-0938731	19990713
2)	EP1236221	A1	20020904	2000EP-0982300	20001129
3)	JP2002522899	T	20020723	2000JP-0564222	19990713
4)	JP2003515945	T	20030507	2001JP-0542358	20001129
5)	TW-439084	B	20010607	1999TW-0112659	19990727
6)	TW-483021	B	20020411	2000TW-0125958	20001206
7)	US6020592	A	20000201	1998US-0128370	19980803
8)	US6300643	B1	20011009	1999US-0455550	19991206
9)	US20020030167	A1	20020314	2001US-0836882	20010417
10)	US20010042827	A1	20011122	2001US-0916998	20010727
	US6528805	B2	20030304		
11)	WO200008670	A2	20000217	1999WO-US15790	19990713
	WO200008670	A3	20000608		
	WO200008670	A9	20000727		
12)	WO200141183	A1	20010607	2000WO-US32576	20001129
	WO200141183	A8	20020523		
	WO200141183	A9	20020620		

Priority :

1998US-0128370	19980803
1999US-0455550	19991206
1999WO-US15790	19990713
2000WO-US32576	20001129
2001US-0836882	20010417
2001US-0916998	20010727

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1 / 12 PLUSPAT - ©QUESTEL-ORBIT

PN - EP1103063 A2 20010530 [EP1103063]

STG - (A2) Pub. Of applic. Without search report

TI - (A2) DOSE MONITOR FOR PLASMA-IMMERSION ION IMPLANTATION DOPING SYSTEM

OTI - (A2) DOSISMONITOR FÜR EINE PLASMAIMMERSIONS-IONENDOTIERUNGSVORRICHTUNG
(A2) CONTROLE DES DOSES POUR SYSTEME DE DOPAGE A IMPLANTATION D'IONS ET IMMERSION DANS DU PLASMA

PA - (A2) VARIAN SEMICONDUCTOR EQUIPMENT (US)
IN - (A2) LIEBERT REUEL B (US); GOECKNER MATTHEW (US); PEDERSEN BJORN O (US)
IC - (A2) C23C-014/48 H01J-037/32
LA - ENGLISH (ENG)
AP - EP99938731 19990713 [1999EP-0938731]
PR - WOUS9915790 19990713 [1999WO-US15790]
US12837098 19980803 [1998US-0128370]
ICAA - H01J-037/32 [2006-01 A - I R M EP]
ICCA - H01J-037/32 [2006 C - I R M EP]
DS - AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
UP - 2001-22

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1 / 1 LEGALI - ©EPO

PN - EP1103063 A2 20010530 [EP1103063]
AP - EP99938731 19990713 [1999EP-0938731]
ACT - 20010530 EP/AK-A [+]
DESIGNATED CONTRACTING STATES:
BENANNTE VERTRAGSSTAATEN
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

20010530 EP/17P-A [+]
REQUEST FOR EXAMINATION FILED
PRUEFUNGSANTRAG GESTELLT
EFFECTIVE DATE: 20010129

20040526 EP/RBV-A [+]
DESIGNATED CONTRACTING STATES (CORRECTION):
BENANNTE VERTRAGSSTAATEN (KORR.)
DE FR GB IE IT

UP - 2004-22

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2 / 12 PLUSPAT - ©QUESTEL-ORBIT

PN - EP1236221 A1 20020904 [EP1236221]
STG - (A1) Public. Of applic. With search report
TI - (A1) DOSE MONITOR FOR PLASMA DOPING SYSTEM
OTI - (A1) DOSISMONITOR FÜR EIN PLASMA-DOTIERUNGSGERÄT
(A1) CONTROLE DES DOSES POUR SYSTEME DE DOPAGE AU PLASMA
PA - (A1) VARIAN SEMICONDUCTOR EQUIPMENT (US)
PA0 - Varian Semiconductor Equipment Associates Inc.; 35 Dory Road; Gloucester, MA 01930 (US)
IN - (A1) FANG ZIWEI (US); GOECKNER MATTHEW (US)
IC - (A1) H01J-037/244 H01J-037/32
LA - ENGLISH (ENG)

AP - EP00982300 20001129 [2000EP-0982300]
PR - WOUS0032576 20001129 [2000WO-US32576]
US45555099 19991206 [1999US-0455550]
ICAA - H01J-037/32 [2006-01 A - I R M EP]
ICCA - H01J-037/32 [2006 C - I R M EP]
DS - AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR
AL LT LV MK RO SI
UP - 2002-36

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1 / 1 LEGALI - ©EPO

PN - EP1236221 A1 20020904 [EP1236221]
AP - EP00982300 20001129 [2000EP-0982300]
ACT -

20020904 EP/AX-A [+]
EXTENSION OF THE EUROPEAN PATENT TO
ERSTRECKUNG DES EUROPAEISCHEN PATENTS AUF
AL;LT;LV;MK;RO;SI

20020904 EP/AK-A [+]
DESIGNATED CONTRACTING STATES:
BENANNTE VERTRAGSSTAATEN
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

20020904 EP/17P-A [+]
REQUEST FOR EXAMINATION FILED
PRUEFUNGSANTRAG GESTELLT
EFFECTIVE DATE: 20020524

20021030 EP/RIN1-A
INVENTOR (CORRECTION)
ERFINDER (KORR.)
FANG, ZIWEI

20021030 EP/RIN1-A
INVENTOR (CORRECTION)
ERFINDER (KORR.)
GOECKNER, MATTHEW

20040526 EP/RBV-A [+]
DESIGNATED CONTRACTING STATES (CORRECTION):
BENANNTE VERTRAGSSTAATEN (KORR.)
DE FR GB IT

20040908 EP/17Q-A [+]
FIRST EXAMINATION REPORT
ERSTER PRUEFUNGSBESCHEID
EFFECTIVE DATE: 20040723

20070103 EP/17Q-A [+]

FIRST EXAMINATION REPORT
ERSTER PRUEFUNGSBESCHEID
EFFECTIVE DATE: 20040723

UP - 2007-01

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3 / 12 PLUSPAT - ©QUESTEL-ORBIT

PN - JP2002522899 T 20020723 [JP2002522899]
STG - (T) Unexam. Pat. Appl. On foreign appl.
IC - (T) C23C-014/48 H01J-037/32 H01L-021/265
AP - JP2000564222T 19990713 [2000JP-0564222]
PR - US12837098 19980803 [1998US-0128370]
WOUS9915790 19990713 [1999WO-US15790]
ICAA - H01J-037/32 [2006-01 A - I R M EP]
ICCA - H01J-037/32 [2006 C - I R M EP]
UP - 2002-35

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4 / 12 PLUSPAT - ©QUESTEL-ORBIT

PN - JP2003515945 T 20030507 [JP2003515945]
STG - (T) Unexam. Pat. Appl. On foreign appl.
IC - (T) C23C-014/48 H01J-037/32 H01L-021/265
AP - JP2001542358T 20001129 [2001JP-0542358]
PR - US45555099 19991206 [1999US-0455550]
WOUS0032576 20001129 [2000WO-US32576]
ICAA - H01J-037/32 [2006-01 A - I R M EP]
ICCA - H01J-037/32 [2006 C - I R M EP]
UP - 2003-23

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5 / 12 PLUSPAT - ©QUESTEL-ORBIT

PN - TW439084 B 20010607 [TW-439084]
STG - (B) Patent
TI - (B) Dose monitor for plasma doping system
PA - (B) VARIAN SEMICONDUCTOR EQUIPMENT (US)
IN - (B) LIEBERT REUEL B (US); GOECKNER MATTHEW (US); PEDERSEN BJORN O (US)
IC - (B) H01J-037/00
AP - TW88112659 19990727 [1999TW-0112659]
PR - US12837098 19980803 [1998US-0128370]
ICAA - H01J-037/32 [2006-01 A - I R M EP]
ICCA - H01J-037/32 [2006 C - I R M EP]
UP - 2001-47

1 / 1 LEGALI - ©EPO

PN - TW439084 B 20010607 [TW-439084]
AP - TW88112659 19990727 [1999TW-0112659]
ACT - 20011027 TW/GD4A-A [+]
ISSUE OF PATENT CERTIFICATE FOR GRANTED INVENTION PATENT
ISSUE OF PATENT CERTIFICATE FOR GRANTED INVENTION PATENT
UP - 2004-28

6 / 12 PLUSPAT - ©QUESTEL-ORBIT

PN - TW483021 B 20020411 [TW-483021]
STG - (B) Patent
TI - (B) Dose monitor for plasma doping system.
PA - (B) VARIAN SEMICONDUCTOR EQUIPMENT (US)
IN - (B) FANG ZIWEI (AU); GOECKNER MATTHEW (US)
IC - (B) H01J-037/244
AP - TW89125958 20001206 [2000TW-0125958]
PR - US45555099 19991206 [1999US-0455550]
ICAA - H01J-037/32 [2006-01 A - I R M EP]
ICCA - H01J-037/32 [2006 C - I R M EP]
UP - 2003-06

1 / 1 LEGALI - ©EPO

PN - TW483021 B 20020411 [TW-483021]
AP - TW89125958 20001206 [2000TW-0125958]
ACT - 20020821 TW/GD4A-A [+]
ISSUE OF PATENT CERTIFICATE FOR GRANTED INVENTION PATENT
ISSUE OF PATENT CERTIFICATE FOR GRANTED INVENTION PATENT

20040511 TW/MM4A-A [-]
ANNULMENT OR LAPSE OF PATENT DUE TO NON-PAYMENT OF FEES
ANNULMENT OR LAPSE OF PATENT DUE TO NON-PAYMENT OF FEES
UP - 2004-31

7 / 12 PLUSPAT - ©QUESTEL-ORBIT - image

PN - US6020592 A 20000201 [US6020592]
STG - (A) United States patent
TI - (A) Dose monitor for plasma doping system
PA - (A) VARIAN SEMICONDUCTOR EQUIPMENT (US)
PA0 - Varian Semiconductor Equipment Associates, Inc., Gloucester MA [US]
IN - (A) LIEBERT REUEL B (US); PEDERSEN BJORN O (US); GOECKNER MATTHEW (US)

IC - (A) H01J-037/244
AP - US12837098 19980803 [1998US-0128370]
PR - US12837098 19980803 [1998US-0128370]
ICAA - H01J-037/32 [2006-01 A - I R M EP]
ICCA - H01J-037/32 [2006 C - I R M EP]
EC - H01J-037/32D1C1
H01J-037/32J
ICO - T01J-237/244A
PCL - ORIGINAL (O) : 250492210
DT - Basic

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1 / 1 LEGALI - ©EPO
PN - US6020592 A 20000201 [US6020592]
AP - US12837098 19980803 [1998US-0128370]
ACT - 20010619 US/RF-A
REISSUE APPLICATION FILED
EFFECTIVE DATE: 20010417
UP - 2003-22

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8 / 12 PLUSPAT - ©QUESTEL-ORBIT - image
PN - US6300643 B1 20011009 [US6300643]
STG - (B1) U.S. Patent (no pre-grant pub.) after Jan. 2, 2001
TI - (B1) Dose monitor for plasma doping system
PA - (B1) VARIAN SEMICONDUCTOR EQUIPMENT (US)
PA0 - Varian Semiconductor Equipment Associates, Inc., Gloucester MA [US]
IN - (B1) FANG ZIWEI (US); GOECKNER MATTHEW (US)
IC - (B1) H01J-037/244
AP - US45555099 19991206 [1999US-0455550]
PR - US45555099 19991206 [1999US-0455550]
US12837098 19980803 [1998US-0128370]
ICAA - H01J-037/32 [2006-01 A - I R M EP]
ICCA - H01J-037/32 [2006 C - I R M EP]
EC - H01J-037/32D1C1
H01J-037/32J
ICO - T01J-237/244A
PCL - ORIGINAL (O) : 250492210; CROSS-REFERENCE (X) : 250397000
DT - Corresponding document
UP - 2001-42

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1 / 1 LEGALI - ©EPO
PN - US6300643 B1 20011009 [US6300643]

AP - US45555099 19991206 [1999US-0455550]
ACT - 20000228 US/AS-A
ASSIGNMENT
OWNER: VARIAN SEMICONDUCTOR EQUIPMENT ASSOCIATES, INC. 35
ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:FANG, ZIWEI;GOECKNER, MATTHEW;REEL/FRAME:010583/0565;SIGNING DATES FROM 20000210 TO 20000212

20030429 US/CC-A
CERTIFICATE OF CORRECTION
UP - 2004-26

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9 / 12 PLUSPAT - ©QUESTEL-ORBIT - image

PN - US2002030167 A1 20020314 [US20020030167]
STG - (A1) Utility Patent Application published on or after January 2, 2001
TI - (A1) Dose monitor for plasma doping system
IN - (A1) LIEBERT REUEL B (US); GOECKNER MATTHEW (US); PEDERSEN BJORN O (US)
IC - (A1) G21K-005/10 H01J-037/08
AP - US83688201 20010417 [2001US-0836882]
PR - US83688201 20010417 [2001US-0836882]
US45555099 19991206 [1999US-0455550]
US12837098 19980803 [1998US-0128370]
ICAA - H01J-037/32 [2006-01 A - I R M EP]
ICCA - H01J-037/32 [2006 C - I R M EP]
EC - H01J-037/32D1C1
H01J-037/32J
ICO - T01J-237/244A
PCL - ORIGINAL (O) : 250492210
DT - Corresponding document
UP - 2002-12

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PN - US2001042827 A1 20011122 [US20010042827]
STG - (A1) Utility Patent Application published on or after January 2, 2001
TI - (A1) Dose monitor for plasma doping system
PA - (A1) VARIAN SEMICONDUCTOR EQUIPMENT (US)
PA0 - Varian Semiconductor Equipment Associates, Inc., Gloucester MA [US]
IN - (A1) FANG ZIWEI (US); GOECKNER MATTHEW (US)
IC - (A1) B01D-059/44 H01J-049/00
PN2 - US6528805 B2 20030304 [US6528805]
STG2 - (B2) U.S. Patent (with pre-grant pub.) after Jan. 2, 2001
TI2 - (B2) Dose monitor for plasma doping system

PA2 - (B2) VARIAN SEMICONDUCTOR EQUIPMENT (US)
IN2 - (B2) FANG ZIWEI (US); GOECKNER MATTHEW (US)
IC2 - (B2) H01J-037/244
AP - US91699801 20010727 [2001US-0916998]
PR - US91699801 20010727 [2001US-0916998]
US45555099 19991206 [1999US-0455550]
US12837098 19980803 [1998US-0128370]
ICAA - H01J-037/32 [2006-01 A - I R M EP]
ICCA - H01J-037/32 [2006 C - I R M EP]
EC - H01J-037/32D1C1
H01J-037/32J
ICO - T01J-237/244A
PCL - ORIGINAL (O) : 250492210; CROSS-REFERENCE (X) : 250397000
DT - Corresponding document
UP - 2001-48

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PN - WO200008670 A2 20000217 [WO200008670]
STG - (A2) Publ. Of int. Appl. W/out int. Search rep
TI - (A2) DOSE MONITOR FOR PLASMA-IMMERSION ION IMPLANTATION DOPING SYSTEM
OTI - (A2) CONTROLE DES DOSES POUR SYSTEME DE DOPAGE A IMPLANTATION D'IONS ET IMMERSION DANS DU PLASMA
PA - (A2) VARIAN SEMICONDUCTOR EQUIPMENT (US)
PA0 - VARIAN SEMICONDUCTOR EQUIPMENT ASSOCIATES, INC. ; 35 Dory Road Gloucester, MA 01930 (US)
IN - (A2) LIEBERT REUEL B; PEDERSEN BJORN O; GOECKNER MATTHEW
IC - (A2) C23C-014/48 H01J-037/32
PN2 - WO200008670 A3 20000608 [WO200008670]
STG2 - (A3) Subsqu. Publ. Of int. Search report
TI2 - (A3) DOSE MONITOR FOR PLASMA-MONITOR ION IMPLANTATION DOPING SYSTEM
OTI2 - (A3) CONTROLE DES DOSES POUR SYSTEME DE DOPAGE A IMPLANTATION D'IONS ET IMMERSION DANS DU PLASMA
PA2 - (A3) VARIAN SEMICONDUCTOR EQUIPMENT (US)
IN2 - (A3) LIEBERT REUEL B; PEDERSEN BJORN O; GOECKNER MATTHEW
IC2 - (A3) C23C-014/48 H01J-037/32
PN3 - WO200008670 A9 20000727 [WO200008670]
STG3 - (A9) Complete corrected document
TI3 - (A9) DOSE MONITOR FOR PLASMA-MONITOR ION IMPLANTATION DOPING SYSTEM
OTI3 - (A9) CONTROLE DES DOSES POUR SYSTEME DE DOPAGE A IMPLANTATION D'IONS ET IMMERSION DANS DU PLASMA

PA3 - (A9) VARIAN SEMICONDUCTOR EQUIPMENT (US)
IN3 - (A9) LIEBERT REUEL B; PEDERSEN BJORN O; GOECKNER MATTHEW
IC3 - (A9) C23C-014/48 H01J-037/32
LA - ENGLISH (ENG)
AP - WOUS9915790 19990713 [1999WO-US15790]
PR - US12837098 19980803 [1998US-0128370]
ICAA - H01J-037/32 [2006-01 A - I R M EP]
ICCA - H01J-037/32 [2006 C - I R M EP]
EC - H01J-037/32D1C1
H01J-037/32J
ICO - T01J-237/244A
DS - JP; KR; European Patent (AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE)
DT - Corresponding document

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PN - WO200008670 A2 20000217 [WO200008670]WO200008670 A3 20000608 [WO200008670]WO200008670 A9 20000727 [WO200008670]
AP - WOUS9915790 19990713 [1999WO-US15790]
ACT - 20000217 WO/AK [+]
DESIGNATED STATES CITED IN A SUBSEQUENTLY PUBLISHED SEARCH REPORT
JP KR

20000217 WO/AL [+]
DESIGNATED COUNTRIES FOR REGIONAL PATENTS CITED IN A SUBSEQUENTLY PUBLISHED SEARCH REPORT
AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

20000406 WO/DFPE
REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE

20000412 WO/121
EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION

20000608 WO/AK [+]
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20000608 WO/AL [+]
DESIGNATED COUNTRIES FOR REGIONAL PATENTS CITED IN A SUBSEQUENTLY PUBLISHED SEARCH REPORT
AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

20000727 WO/AK [+]
DESIGNATED STATES CITED IN A SUBSEQUENTLY PUBLISHED SEARCH REPORT

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20000727 WO/AL [+]
DESIGNATED COUNTRIES FOR REGIONAL PATENTS CITED IN A SUBSEQUENTLY PUBLISHED SEARCH REPORT
AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

UP - 2003-22

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PN - WO200141183 A1 20010607 [WO200141183]
STG - (A1) Publ. Of int. Appl. With int. Search rep
TI - (A1) DOSE MONITOR FOR PLASMA DOPING SYSTEM
OTI - (A1) CONTROLE DES DOSES POUR SYSTEME DE DOPAGE AU PLASMA
PA - (A1) VARIAN SEMICONDUCTOR EQUIPMENT (US)
PA0 - VARIAN SEMICONDUCTOR EQUIPMENT ASSOCIATES, INC.; 35 Dory Road, Gloucester, MA 01930 (US)
IN - (A1) FANG ZIWEI (US); GOECKNER MATTHEW (US)
IC - (A1) H01J-037/244 H01J-037/32
PN2 - WO200141183 A8 20020523 [WO200141183]
STG2 - (A8) Modified first page
TI2 - (A8) DOSE MONITOR FOR PLASMA DOPING SYSTEM
OTI2 - (A8) CONTROLE DES DOSES POUR SYSTEME DE DOPAGE AU PLASMA
PA2 - (A8) VARIAN SEMICONDUCTOR EQUIPMENT (US)
IN2 - (A8) FANG ZIWEI (US); GOECKNER MATTHEW (US)
IC2 - (A8) H01J-037/244 H01J-037/32
PN3 - WO200141183 A9 20020620 [WO200141183]
STG3 - (A9) Complete corrected document
TI3 - (A9) DOSE MONITOR FOR PLASMA DOPING SYSTEM
OTI3 - (A9) CONTROLE DES DOSES POUR SYSTEME DE DOPAGE AU PLASMA
PA3 - (A9) VARIAN SEMICONDUCTOR EQUIPMENT (US)
IN3 - (A9) FANG ZIWEI (US); GOECKNER MATTHEW (US)
IC3 - (A9) H01J-037/244 H01J-037/32
LA - ENGLISH (ENG)
AP - WOUS0032576 20001129 [2000WO-US32576]
PR - US45555099 19991206 [1999US-0455550]
ICAA - H01J-037/32 [2006-01 A - I R M EP]
ICCA - H01J-037/32 [2006 C - I R M EP]
EC - H01J-037/32D1C1
H01J-037/32J
DS - IL; JP; KR; European Patent (AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE; TR)
DT - Basic

UP - 2001-24

1/1 LEGALI - ©EPO

PN - WO200141183 A1 20010607 [WO200141183]WO200141183 A8 20020523 [WO200141183]WO200141183 A9 20020620 [WO200141183]

AP - WOUS0032576 20001129 [2000WO-US32576]

ACT -

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20010607 WO/AL [+]
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AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

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EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION

20011018 WO/DFPE
REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE

20020523 WO/CFP
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20020523 WO/AK [+]
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20020531 WO/ENP
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20020605 WO/WWE [+]
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20020620 WO/COP
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20020713 WO/WWP [+]
WIPO INORMATION: PUBLISHED IN NATIONAL OFFICE
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UP - 2006-42

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w/seg	in same segment
w/s	in same sentence
and not	and not

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or	or
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pre /N	precedes by N words
w/p	in same paragraph
w/seg	in same segment
w/s	in same sentence
and not	and not

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- Remove some search terms.
- Use more common search terms, such as those listed in "Suggested Words and Concepts"
- Use a less restrictive date range.

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Terms and Connectors | Natural Language | Easy Search

(6020592 or 6,020,592)

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Select a document segment, enter search terms for the segment, then click Add.

Select a Segment | Add

Note: Segment availability differs between sources. Segments may not be applied consistently across sources.

Restrict by Date:

No Date Restrictions | From | To | Date Formats...

Search Help

Search Connectors

and	and
or	or
w/N	within N words
pre /N	precedes by N words
w/p	in same paragraph
w/seg	in same segment
w/s	in same sentence
and not	and not

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- Use a less restrictive date range.

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